

Structure of the larynx



Running head: STRUCTURE OF THE LARYNX On the Structure of the Larynx

and its Functions The larynx is a complex organ located just below the border of the pharynx or the throat. It is an organ that is substantial to basic processes of the body such as breathing, swallowing, speaking and etc.

According to the Milton J. Dance, Jr. Head & Neck Rehabilitation Center (1999), " the larynx is suspended from the hyoid bone"; the only bone in the body that is not attached to any other bone. The larynx's structure is comprised of the thyroid cartilage, cricoid cartilage, epiglottis, arytenoid, cuneiform and corniculate cartilages. At the anterior part of the larynx is the thyroid cartilage and its bottom is attached to the ring-like cricoid cartilage. The cricoid cartilage in turn is the connecting cartilage that attaches the larynx to the trachea or the air passage. The epiglottis on the other hand, is connected to the thyroid cartilage at its notch. Because of its leaf like shape and position, it " helps to direct food and liquid into the esophagus and to protect the vocal cords and trachea during swallowing" (Milton J. Dance, Jr. Head & Neck Rehabilitation Center, 1999).

The arytenoids are the connecting cartilages that attach the vocal folds to the larynx.

Larson (n. d.) states that as a whole, " the cartilages and the bone provide a somewhat flexible and rigid framework for support of softer tissues and muscles".

The skeletal frame of the larynx is systematically supported by the attaching muscles. According to John Hopkins Medicine (n. d.), " the control over these muscles is provided by two branches of the vagus nerve: the recurrent laryngeal nerve and the superior laryngeal nerve". These are the extrinsic and intrinsic laryngeal muscles, which are called accordingly because of the

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position of its attachments. " The extrinsic muscles are described as such because they attach to a site within the larynx and to a site outside of the larynx (such as the hyoid bone jaw, etc.)" (Milton J. Dance, Jr. Head & Neck Rehabilitation Center, 1999). These extrinsic laryngeal muscles are further grouped into the suprahyoid group (above the hyoid bone) and the infrahyoid group (below the hyoid bone). The suprahyoid laryngeal muscles are responsible for lifting the larynx while the infrahyoid laryngeal muscles are responsible for lowering the hyoid bone and larynx. Given the reverse movements of the muscle groups, the suprahyoid and infrahyoid muscles are therefore involved in the process of swallowing.

The intrinsic laryngeal muscles on the other have all their attachments within the larynx. Encased within the larynx are the vocal folds or the vocal cords. When air passes from the trachea through the larynx, the vocal folds produces vibrating movements. Sounds are produced with every puff of air that escapes every vibration of the vocal folds. Pitch and intensity of the sound vary with the air pressure coming from the lungs and the resistance of the intrinsic laryngeal muscles. " All of the intrinsic laryngeal muscles work together to adduct (close) the vocal cords with the exception of the posterior cricoarytenoid, which is the only muscle that abducts (opens) the vocal chords" (Milton J. Dance, Jr. Head & Neck Rehabilitation Center, 1999).

In conclusion, the larynx is substantial for every living human because humans utilize the larynx in very basic needs such as breathing, talking and swallowing. A malfunction or an injury to any part of the larynx would therefore mean a drastic effect on people's lives.

References

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